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7590 02/25/2004
Joseph T. Guy Ph.D.
Nexsen Pruet Jacobs & Pollard LLP
201 W. McBee Avenue
Greenville, SC 29603

EXAMINER

FLETCHER III, WILLIAM P

| ART UNIT | PAPER NUMBER |
|----------|--------------|
|----------|--------------|

1762

DATE MAILED: 02/25/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/996,108

Applicant(s)

LOCCUFIER ET AL.

Examiner

William P. Fletcher III

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 January 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 6-15 and 17-31 is/are rejected.
- 7) ☒ Claim(s) 32 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 1/29/2004 has been entered.

Response to Arguments

2. Applicant's arguments, see the response filed 1/29/2004, with respect to the rejections of claims 21 and 24-32 under 35 U.S.C. § 102(e) set-forth in the Office action mailed 10/31/2003 have been fully considered and are persuasive. These rejection have been withdrawn.

3. Applicant's arguments filed 1/29/2003, with respect to

- a. the rejections of claims 1-20 under 35 U.S.C. § 112, 1st Para. and
- b. the rejections of claims 1-4, 6-15, and 17-31 under 35 U.S.C. § 103(a),

set-forth in the Office action mailed 10/31/2003, have been fully considered but they are not persuasive.

With respect to a, applicant argues that the recitation of "printing droplets of a fluid onto a hydrophilic surface" may be found in the first two paragraphs at p. 15 of the spec. Again, the examiner's position is that the originally-filed disclosure disclosed only *cross-linked* hydrophilic supports, not *any and all* hydrophilic supports; possession of a species not supporting possession of a genus. The second paragraph at p. 15 of the spec. states "According to another mode in connection with the present invention the lithographic base with a hydrophilic surface comprises

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a flexible support, such as e.g. paper or plastic film, coated with a cross-linked hydrophilic layer.” While this sentence appears to refer back to a previous disclosure of a hydrophilic support (“According to another mode...the lithographic base with a hydrophilic surface...”), there is, in fact, no such disclosure. The only embodiment supported by the originally-filed disclosure is of a cross-linked hydrophilic surface. Consequently, this argument is not persuasive. Applicant further argues, “...one of ordinary skill in the art would know that the anodizing techniques referred to in the first paragraph on page 15 of the present application produce a hydrophilic surface.” While this may be true, these anodizing techniques are disclosed only in conjunction with aluminum and so this disclosure does not support any and all hydrophilic surfaces.

With respect to b, applicant argues that, since the claims recite the oleophilizing compound is “capable of reacting with [the] surface of [the] lithographic receiver,” direct application of the oleophilizing compound to the *support* is required. This is not true. The claims merely recite application to a hydrophilic *receiver*. While suitable *supports* are disclosed at p. 15 of the spec., there is no disclosure or evidence of record that the *receiver* of the claims necessarily excludes a metallic *support* coated with a silver image (i.e., the support/image composite constitutes the receiver). Further, as noted by the examiner at the very beginning of prosecution, the claims require that the oleophilizing compound be *capable* of reacting; the exact nature and extent of the reaction not being disclosed. This issue has been clearly addressed in the text of all rejections since the first, is included in the rejections below, and has not yet been directly traversed by applicant.

Claim Rejections - 35 USC § 112

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4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. **Claims 1 – 20 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement.** The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Independent claims 1, 11, and 12 have been amended to recite “printing droplets of a fluid onto a hydrophilic surface.” The originally-filed disclosure does not support *any and all* hydrophilic supports, disclosing, at p. 15 of the spec., only *cross-linked* hydrophilic supports. Possession of a species does not support possession of a genus.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later

invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

8. **Claims 1 – 4, 6 – 15, and 17 – 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Leenders et al. (US 5,501,150 A) in view of Boston (US 4,223,087 A).**

Leenders teaches a method for the preparation of a lithographic printing plate. The method comprises forming a silver image on a lithographic receiver, followed by oleophilizing the silver image by applying a compound that both oxidizes and fixes the silver image [abstract and c. 8, l. 58 – c. 9, l. 22]. The lithographic receiver may either be a grained and anodized aluminum plate (i.e., a metallic support) or a support with a hydrophilic receiving layer thereon containing SiO₂ or TiO₂ therein [c. 9, l. 34 – c. 10, l. 60 and c. 10, l. 61 – c. 11, l. 40]. The lithographic oxidizer/fixer imparts a strong hydrophobic (i.e., oleophilic) character to the oxidized silver image, and is applied image-wise by means of ink-jet printing [c. 8, l. 58 – c. 9, l. 22].

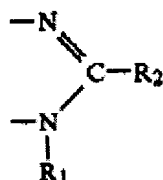
While Leenders teaches that the lithographic oxidizer/fixer comprises organic compounds with groups including HS-C=N and S=C-NH, the reference does not, explicitly, teach the amidine group-containing compounds recited in claims 1, 11, and 12.

Boston teaches a method for the preparation of a lithographic printing plate very similar to that of Leenders. The method comprises forming a silver image on a lithographic receiver, followed by oleophilizing the silver image by applying a compound that both oxidizes and fixes the silver image [abstract and c. 3, l. 22 – c. 4, l. 64]. The lithographic receiver is a support with a hydrophilic receiving layer thereon [see Examples]. The oxidizer/fixer comprises a salt solution of a ferricyanide anion and organic cation complexing agent [c. 3, l. 22 – c. 4, l. 66].

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The ferricyanide anion serves to oxidize the silver image while the organic cation forms a water-insoluble, oleophilic complex with the oxidized silver image. Examples of the cation include cyclic and acyclic amidines defined at c. 4, ll. 29 – 66 as:

Examples of nitrogen-substituted hydrocarbon compounds include cyclic and acyclic amidines, i.e., compounds having the formal chemical grouping:



wherein R₁ and R₂ may be hydrogen, hydrocarbons, or nitrogen-substituted hydrocarbons in any of the classes, alkyl, aryl, or aralkyl, and where cyclic or ring-structured amidines are completed by hydrocarbon groups to provide 5- or 6-membered ring structures. Exemplary acyclic amidines include acetamidine, benzamidine, guanidine and biguanide. Typical cyclic amidines include 2-propyl-2-imidazoline, 2-pentyl-2-imidazoline, 2-benzyl-2-imidazoline and naphthazoline.

Further examples of suitable complexing agents include aromatic nitrogen-substituted heterocyclic aromatic compounds, such as 5- and 6-membered cyclic or bicyclic compounds containing one or more nitrogen atoms therein, including mono-substituted or poly-substituted hydrocarbon or nitrogen functional hydrocarbon derivatives thereof. Exemplary aromatic heterocyclic compounds include 2-methylimidazole, 1-benzylimidazole, 1-butylimidazole, 2-undecylimidazole, 2,2'-dipyridylamine, 2,4-lutidine, pyridine, and N-aminopyridine. Bicyclic compounds include benzimidazole, 2-methylbenzimidazole, 1-ethyl-2-methylbenzimidazole.

The aromatic nitrogen heterocyclic compounds should all contain at least one nitrogen atom in the parent ring structure which is sterically unhindered, so as to be capable of coordination to a silver ion, i.e., capable of forming a chemical bond therewith.

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R1 and R2 in Boston are analogous to applicant's R3 and R4, respectively. With respect to claim 11, it is the examiner's position that this teaching reads on several of the compounds recited in this claim. See, for example, the last compound on p. 7 of paper no. 10. Here, R3 is nitrogen-substituted hydrocarbon and R4 is a hydrocarbon. With respect to claim 12, it is the examiner's position that this teaching reads on compounds where R3 and R4 are aryl.

To summarize: Leenders teaches a method of manufacturing a printing plate in which an oxidizing/fixing solution is applied, image-wise, via ink-jet printing to a silver image. This oxidizing/fixing solution contains both hexacyanoferrate(III) ions and organic compounds containing NH-groups. Boston teaches a similar method in which an oxidizing/fixing solution is specified to include $[\text{Fe}(\text{CN})_6]^{3-}$ ions and an amidine compound as recited in applicant's claims. Since both references disclose utilizing the oxidizing/fixing solutions in the same fashion to the same end, it would have been obvious to one of ordinary skill in the art to modify the method of Leenders so as to apply, image-wise via ink-jet printing, as the oxidizing/fixing solution, the oxidizing/fixing solution of Boston. One of ordinary skill in the art would have been motivated to do so by the desire and expectation of successfully rendering the lithographic printing plate oleophilic.

With respect to independent claims 1, 11, and 12, the silver image-coated support reads on applicant's claimed hydrophilic support. Since the oxidizing/fixing solution is applied to the silver image to render it oleophilic the silver image must, necessarily, be hydrophilic prior to said oxidizing/fixing.

With respect to independent claim 1, the oxidizing/fixing solution (which reads on applicant's "fluid") has dissolved therein the amidine-containing organic cation (which reads on

applicant's "oleophilizing compound"). The examples of this cation described in the passage above are clearly inclusive of cations with a single amidine group.

With respect to new independent claim 21, the language of this claim is broad enough to include the fluid's being *directly* and *indirectly* dispensed on the surface of the support. In other words, "onto a surface of a metallic support" is inclusive of dispensing the oxidizing/fixing solution onto the silver-image coated, grained and anodized aluminum support. Consequently, Leenders in view of Boston teaches this limitation as well. The examiner further notes that the silver coating itself is also considered to read on "the surface of a metallic support."

With respect to new independent claim 28, as noted above, insofar as the fluid is used to print a pattern on the receiver, this fluid reads on an "ink."

With respect to claims 4, 15, 26, and 31, Boston teaches a specific example in which the amidine-containing compound is added in an amount of approximately 17 % by weight based on the total solids content of the oxidizing/fixing solution [c. 6, ll. 30 – 40]. It is, however, the examiner's position that the amount of fixing cation in the solution is a result-effective variable determining the resulting oleophilicity of the plate. Absent clear and convincing evidence demonstrating the criticality of the claimed wt.-% range, it would have been obvious to one of ordinary skill in the art to optimize such a result-effective variable in the method of Leenders in view of Boston by routine experimentation. [See MPEP § 2144.05(II)(A): Generally, differences in concentration will not support the patentability of subject matter encompassed by the prior art unless there is evidence indicating such concentration is critical. "[W]here the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation. See also MPEP § 716.01(c): the arguments of

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counsel cannot take the place of evidence in the record. Examples of attorney statements which are not evidence and which must be supported by an appropriate affidavit or declaration include statements regarding unexpected results.]

With respect to claims 6, 7, 17, 18, and 23, the language of these claim is broad enough to include the fluid's being *directly* and *indirectly* dispensed on the surface of the support. In other words, "onto a surface of a metallic support" is inclusive of dispensing the oxidizing/fixing solution onto the silver-image coated, grained and anodized aluminum support. Consequently, Leenders in view of Boston teaches this limitation as well. The examiner further notes that the silver coating itself is also considered to read on "the surface of a metallic support," because silver is a metal. With respect to claim 22, it is the examiner's position that the grained and anodized aluminum support reads on applicant's claimed "oxidized" support. The examiner notes that applicants disclose such a support as reading on an "oxidized" support at p. 15 of the sub. spec. filed 12/16/02.

With respect to claims 9, 10, and 20, it is the examiner's position that SiO₂ and TiO₂ read on inorganic pigments.

With respect to claims 8 and 19, it is the examiner's position that the binders taught by Leenders, at c. 11, ll. 3 – 34, read on cross-linked or cross-linkable binders.

Allowable Subject Matter

9. Claims 5, 16, and 32 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The following is a statement of reasons for the indication of

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allowable subject matter: Neither Leenders nor Breton teach or suggest an oxidizing/fixing solution that contains a colorant.


Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to William P. Fletcher III whose telephone number is (571) 272-1419. The examiner can normally be reached on Monday through Friday, 9 AM to 5 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Shrive P. Beck can be reached on (571) 272-1415. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

WPF 2/17/2004
William P. Fletcher III
Examiner
Art Unit 1762


SHRIVE P. BECK
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700